

Title: Design and Testing of Suit Regulator Test Rigs

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Abstract:

The next generation space suit requires additional capabilities for controlling and adjusting internal pressure compared to that of historical designs. Next generation suit pressures will range from slight pressure, for astronaut prebreathe comfort, to hyperbaric pressure levels for emergency medical treatment of decompression sickness. In order to test these regulators throughout their development life cycle, novel automated test rigs are being developed. This paper addresses the design philosophy, performance requirements, physical implementation, and test results with various units under test.